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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,328	02/20/2002	Susumu Matsui	56232.18 [5042]	9796

7590

06/05/2003

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EXAMINER

PHAM, HAI CHI

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .		Applicant(s)	
	10/081,328		MATSUI ET AL.	
	Examiner		Art Unit	
	Hai C Pham		2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____ .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____ .
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: . |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kunii (U.S. 5,754,326).

Kunii discloses an optical deflection device comprising a rotary body formed of a magnet (rotor magnet 40), to which a polygon mirror 9110 is fixed, a bearing (19) to which the rotary body is fixed, and a base table (99) having a coil (stator coil 31) facing the magnet, the coil capable of rotating the rotary body formed of the magnet.

With regard to claims 2-4 and 7, Kunii further teaches:

- the rotary body (40) being made of an molded plastic magnet which is fixed on the bearing by an injection molding (col. 5, lines 30-42),
- the rotary body is fixed on the bearing by adhesion (adhesive 97) (col. 5, lines 4-16) (col. 5, line 43 to col. 6, line 7),

Art Unit: 2861

- the rotary body is provided on a portion that in contact with bearing with a cutout or irregularity (groove 98) (col. 5, lines 43-59),
- the optical deflection device being used in a laser printer having a light source and a scanner for scanning the deflected light onto a recording medium, thereby recording an image thereon (Fig. 5).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunii in view of Kuwayama et al. (U.S. 5,874,793).

Kunii discloses all the basic limitations of the claimed invention except for the bearing being a dynamic pressure bearing, and being made of ceramic.

Kuwayama et al. discloses a optical deflector comprising a rotor (21) in which a magnet 18 is integrally fitted, a stationary shaft (12) made of a ceramic material, the ceramic stationary shaft being formed with dynamic pressure generating grooves, the dynamic pressure bearing used in such high speed rotor assembly would provide a stable accuracy of rotation for an extended period of time for the rotating polygon mirror.

Art Unit: 2861

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the ball bearing in the device of Kunii with the dynamic pressure bearing as taught by Kuwayama et al. The motivation for doing so would have been to provide the high speed rotor assembly with a stable accuracy of rotation for an extended period of time as suggested by Kuwayama et al. at col. 1, lines 14-23).

Additional Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gan et al. (JP 8-93750) discloses a compact light-deflecting device having a dynamic pressure bearing and a plastic magnet integrally formed into the rotary body, which is firmly bonded to the polygon mirror.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

Art Unit: 2861

308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

May 30, 2003